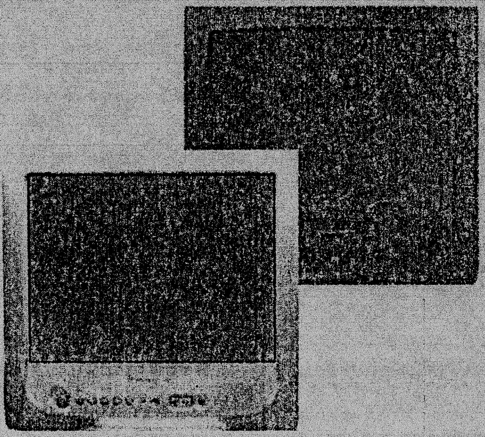
ORDER No. SM-02011

Service Manual



Colour Television
TX-14B4TP
TX-14B4TP/B
TC-14B4RP
TC-14B4RP/B
Z-185 Chassis

SPECIFICATIONS

Power Source:	220-240V a.c., 50Hz
Power Consumption:	39W
Stand-by Power Consumption:	2.9W
Receiving System:	SECAM B/G , D/K PAL B/G , D/K , H , 525/60 M.NTSC NTSC (AV only)

Receiving Channels:

VHF E2-E12
VHF A-H (ITALY)
VHF R3-R5
UHF E21-E68
CATV S1-S10 (M1-M10)
CATV S21-S41 (HYPERBAND)
VHF H1-H2 (ITALY)
VHF R1-R2
VHF R6-R12
CATV (S01-S05)
CATV S11-S20 (U1-U10)

Intermediate Frequency:
Video/Audio

Video	38.9MHz
Audio	33.16MHz, 33.4MHz 32.4MHz, 33.05MHz
Colour	34.47MHz (PAL) 34.5MHz, 34.65MHz (SECAM)

Terminals:

AV1 IN	Video (21 pin)	1V p-p 75Ω
	Audio (21 pin)	500mV rms 10kΩ
	RGB (21 pin)	
	Audio (RCA x 1)	500mV rms 10kΩ
	Video (RCA x 1)	1V p-p 75Ω
AV1 OUT	Video (21 pin)	1V p-p 75Ω
	Audio (21 pin)	500mV rms 1kΩ

Picture Tube:	A34EAC01X06 34cm
High Voltage:	26.5 ± 1kV
Audio Output: (Music Power)	2.5W 8Ω Impedance
Headphones:	8Ω Impedance 3.5mm
Accessories supplied :	Remote Control 2 x R6 (UM3) Batteries

Dimensions:

Height:	342mm
Width:	366mm
Depth:	376mm
Net weight:	9.6kg

Specifications are subject to change without notice.
Weights and dimensions shown are approximate.

Panasonic

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SAFETY PRECAUTIONS

GENERAL GUIDE LINES

1. It is advisable to insert an isolation transformer in the a.c. supply before servicing a hot chassis.
2. When servicing, observe the original lead dress in the high voltage circuits. If a short circuit is found, replace all parts that have been overheated or damaged by the short circuit.
3. After servicing, see that all the protective devices such as insulation barriers, insulation papers, shields and isolation R-C combinations are correctly installed.
4. When the receiver is not being used for a long period of time, unplug the power cord from the a.c. outlet.
5. Potentials as high as 27.5kV are present when this receiver is in operation. Operation of the receiver without the rear cover involves the danger of a shock hazard from the receiver power supply. Servicing should not be attempted by anyone who is not familiar with the precautions necessary when working on high voltage equipment. Always discharge the anode of the tube.
6. After servicing make the following leakage current checks to prevent the customer from being exposed to shock hazard.

LEAKAGE CURRENT COLD CHECK

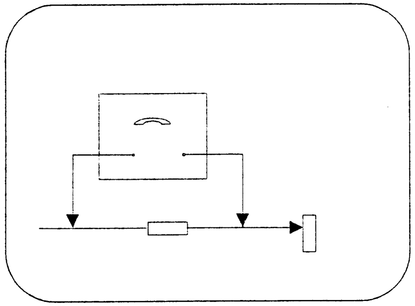
1. Unplug the a.c. cord and connect a jumper between the two prongs of the plug.
2. Turn on the receiver's power switch.
3. Measure the resistance value with an ohmmeter, between the jumpered a.c. plug and each exposed metallic cabinet part on the receiver, such as screw heads, aerials, connectors, control shafts etc. When the exposed metallic part has a return path to the chassis, the reading should be between 4M ohm and 20M ohm. When the exposed metal does not have a return path to the chassis, the reading must be infinite.

LEAKAGE CURRENT HOT CHECK

1. Plug the a.c. cord directly into the a.c. outlet. Do not use an isolation transformer for this check.
2. Connect a 2kΩ 10W resistor in series with an exposed metallic part on the receiver and an earth, such as a water pipe.
3. Use an a.c. voltmeter with high impedance to measure the potential across the resistor.
4. Check each exposed metallic part and check the voltage at each point.
5. Reverse the a.c. plug at the outlet and repeat each of the above measurements.
6. *The potential at any point should not exceed* 1.4V rms. In case a measurement is outside the limits specified, there is a possibility of a shock hazard, and the receiver should be repaired and rechecked before it is returned to the customer.

X-RADIATION WARNING

1. The potential sources of X-Radiation in TV sets are the high voltage section and the picture tube.
2. When using a picture tube test jig for service, ensure that the jig is capable of handling 27.5kV without causing X-Radiation.



NOTE: It is important to use an accurate periodically calibrated high voltage meter.

1. Set the brightness to minimum.
2. Measure the high voltage. The meter should indicate 26.5kV ± 1kV.
   If the meter indication is out of tolerance, immediate service and correction is required to prevent the possibility of premature component failure.
3. To prevent any X-Radiation possibility, it is essential to use the specified tube.

SERVICE HINTS

How to remove the rear cover

1. Remove the 10 screws as shown in **Fig.2.**

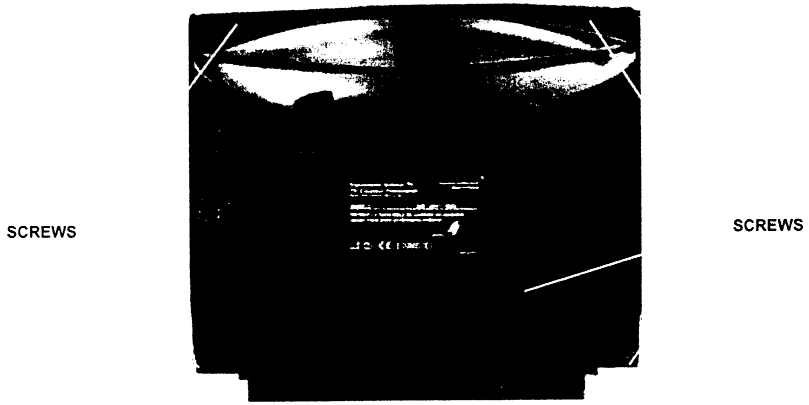


Fig.2.

LOCATION OF CONTROLS

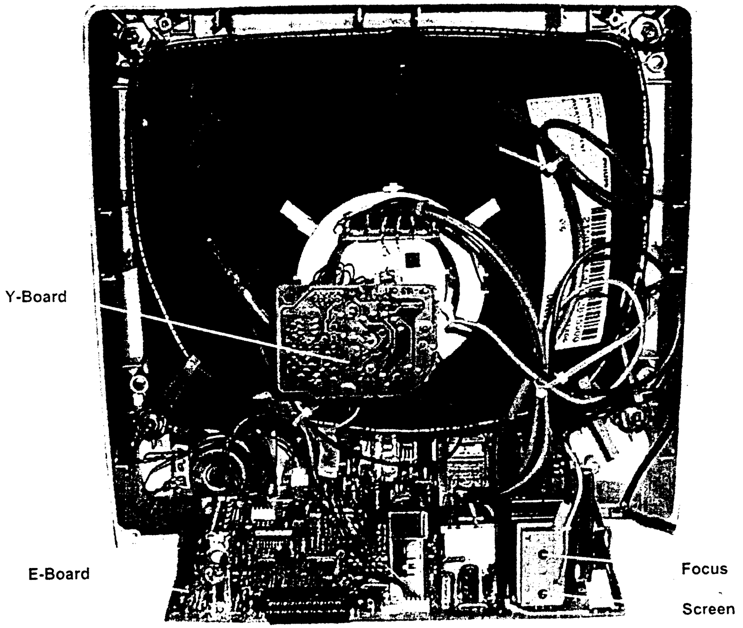


Fig.3.

ALIGNMENT PROCEDURE AND OPTION SETTING

Entering SERVICE mode
Service mode is entered by selecting the "mute" remote key and local "down" simultaneously with the sharpness DAC set to Minimum and programme position 99 selected.
Service mode 2 is selected by pressing the Recall remote key while in service mode 1.
Service mode navigation
- Up /Down remote keys :cycle through the service items available.
- -/+ remote keys :Decrement/Increment the values within range.
- TV/AV :Store the current data.
- 0 – 7 digit keys :Toggle bits 0-7 in option byte (service mode 2).

Order	Item	Range
1	Cut off (VG2)	LED ON , LED OFF
2	Vertical slope	0-63
3	Vertical Shift	0-63
4	Vertical amplitude	0-63
5	Horizontal shift	0-63
6	Red Cut	0-63
7	Green Cut	0-63
8	Red Drive	0-63
9	Green Drive	0-63
10	Blue Drive	0-63
11	AGC	0-63
12	Sub-Colour	0-63
13	Sub-Brightness	0-63

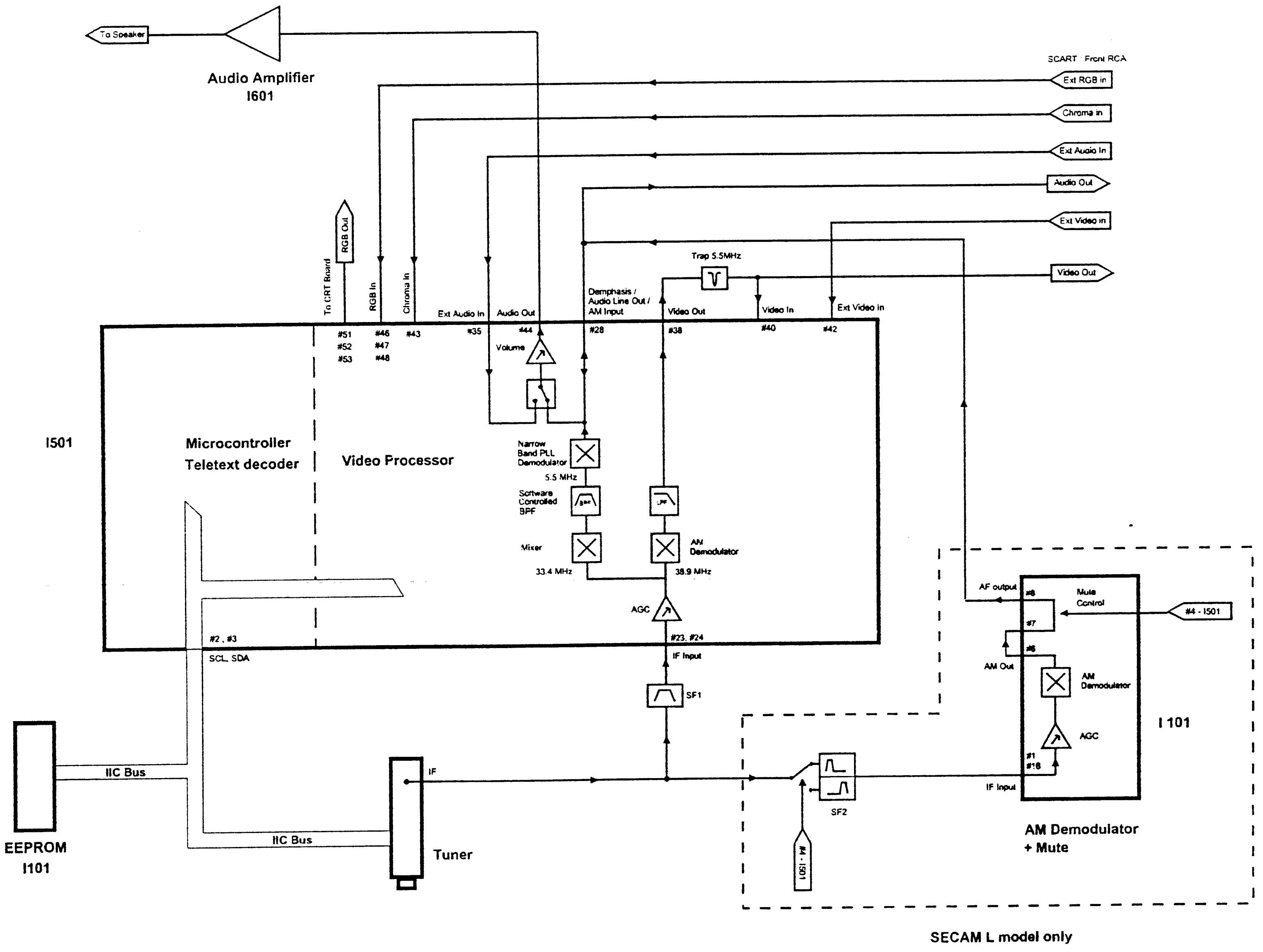
Sub-Colour: Set sub-colour to 16.

Sub-Brightness: Set sub-colour to 33.

G2 alignment: Before entering into service mode, recall the nominal picture setting :remote key "N". From this setting, increase brightness by 11 steps and reduce sharpness to minimum. Tune a colour bar signal on Prg 99 and enter into SVC mode. In SVC mode , select "G2" item and press – or + remote key to control software disable vertical deflection. The user must then adjust G2 voltage on FBT, to find the point where LED is ON. Press – or + remote key to return to normal SVC mode.

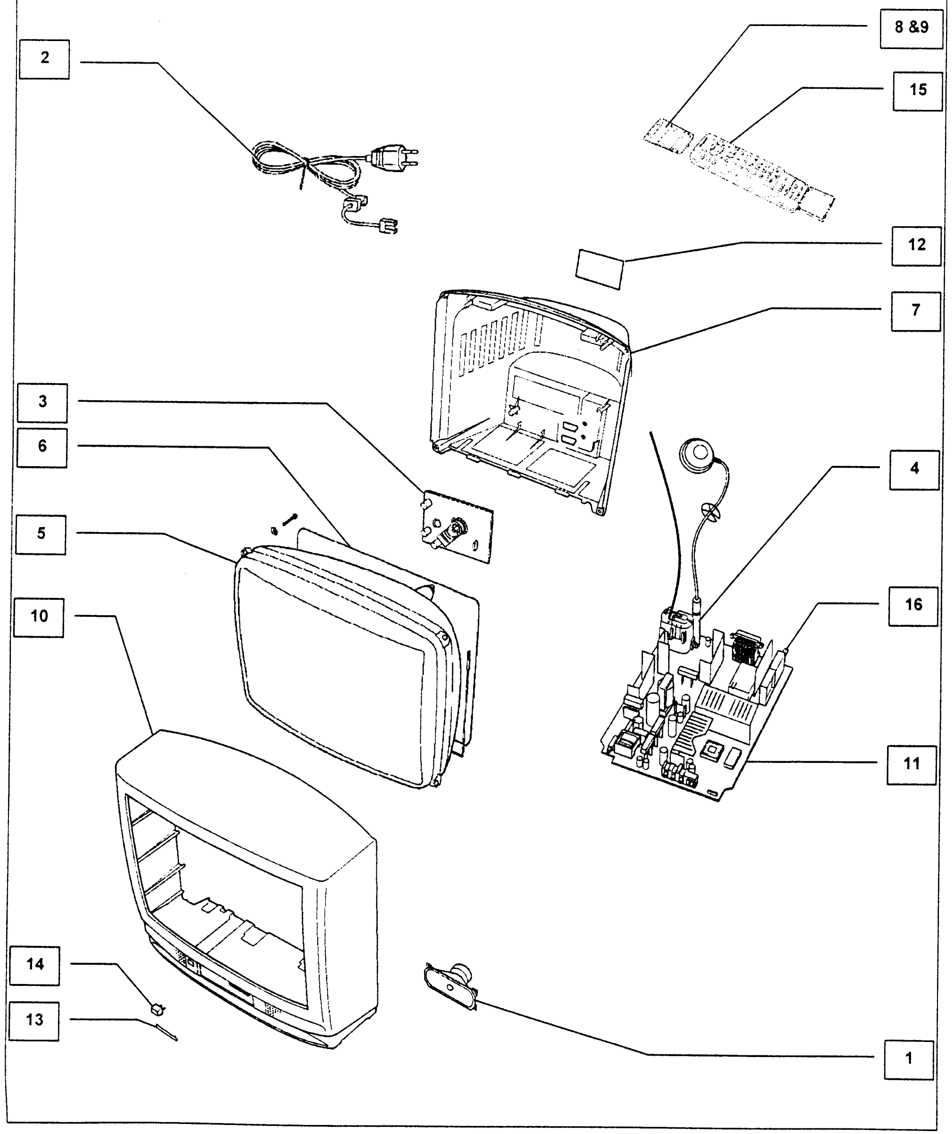
White balance:
- Select a dark picture and adjust Red Cut and Green Cut to the desired colour temperature.
- Select a bright picture, set Blue Drive to 32 and adjust Red Drive, and Green Drive to the desired colour temperature.

CIRCUIT BLOCK DIAGRAM


To Speaker
Audio Amplifier
I601
SCART · Front RCA
Ext RGB in
Chroma in
Ext Audio In
Audio Out
Ext Video in
Video Out
RGB Out
To CRT Board
RGB In
Chroma In
Ext Audio In
Audio Out
Demphasis / Audio Line Out / AM Input
Trap 5.5MHz
Video Out
Video In
Ext Video In
#51
#52
#53
#46
#47
#48
#43
#35
#44
#28
#38
#40
#42
Volume
I501
Microcontroller
Teletext decoder
Video Processor
Narrow Band PLL Demodulator
5.5 MHz
Software Controlled BPF
Mixer
33.4 MHz
AM Demodulator
38.9 MHz
AGC
#2 , #3
SCL, SDA
#23, #24
IF Input
SF1
EEPROM
I101
IIC Bus
IIC Bus
IF
Tuner
SF2
#4 - I501
IF Input
#1
#16
AGC
AM Demodulator
AM Out
#6
#7
#8
AF output
Mute Control
#4 - I501
I 101
AM Demodulator
+ Mute
SECAM L model only

PARTS LOCATION

NOTE:
The numbers on the exploded view below refer to the mechanical section of the Replacement Parts List.



REPLACEMENT PARTS LIST

Important Safety Notice
Components Identified by ⚠ mark have special characteristics important for safety.
* When replacing any of these components, use only manufacturers specified parts.
In case of ordering these spare parts, please always add the complete Model-Type number to your order.

COMMON PARTS

EXPLODED VIEW

Cct Ref	Parts Number	Description	
1	4858314010	SPEAKER	⚠
2	4859902910	POWER CORD	⚠
3	485Y-14B4C	Y P.C.B.	⚠
4	50H0000211	F.B.T.	⚠
5	A34EAC01X06	C.R.T	⚠
6	DC-1450	DEGAUSS COIL	⚠

MISCELLANEOUS COMPONENTS

Cct Ref	Parts Number	Description	
.	4858191200	CUSHION	
.	GPBMA1V5012	CARTON	
.	TZS7ED008	ROD ANTENNA	
SCT1	PCS633A	CRT SOCKET	⚠

I.C.s

Cct Ref	Parts Number	Description	
I101	TDA9830	AM DEMODULATOR	
I301	TDA8357J	VERTICAL AMPLIFIER	
I601	TDA7267A	MONO AMPLIFIER	
I801	STRF6653	POWER SUPPLY SWITCHING	
I804	KP1010C	OPTO COUPLER	
I806	SE110N	ERROR AMPLIFIER	
I820	KA7805	5V REGULATOR	
I822	KA7808	8V REGULATOR	
I823	LP295033	3.3V REGULATOR	
I901	TDA6107Q	RGB OUTPUT	

FUSES

Cct Ref	Parts Number	Description	
F801	5FSCB4022R	FUSE 4A250V	⚠

DIODES

Cct Ref	Parts Number	Description	
D101	DBAT85	DIODE	
D151	D1SS85TA	DIODE	
D341	DUZ33B	DIODE	
D350	DTZX12C	DIODE	
D360	DTZX22C	DIODE	
D361	DUZ33B	DIODE	
D403	BY228	DIODE	
D407	DBYW36	DIODE	
D408	DBYW36	DIODE	
D510	DTZX3V9B	DIODE	
D511	DTZX3V9B	DIODE	
D520	1N4148	DIODE	
D521	1N4148	DIODE	
D710	DTZX5V1B	DIODE	
D801	DBYT51J	DIODE	
D802	DBYT51J	DIODE	
D803	DBYT51J	DIODE	
D804	DBYT51J	DIODE	
D811	DTZX5V6B	DIODE	
D820	DBYW76	DIODE	
D821	DBYW36	DIODE	
D822	DTZX9V1B	DIODE	
D824	1N4148	DIODE	
D825	1N4148	DIODE	
D840	1N4148	DIODE	
D841	1N4148	DIODE	
D904	DBAV21	DIODE	
D905	DBAV21	DIODE	
D906	DBAV21	DIODE	
DA02	DTZX12C	DIODE	
DA05	DTZX5V6B	DIODE	
DA06	DTZX5V6B	DIODE	
DA08	DTZX5V6B	DIODE	
DA09	DTZX5V6B	DIODE	
DA10	DTZX5V6B	DIODE	
DA11	DTZX5V6B	DIODE	
DA27	DTZX5V6B	DIODE	
I810	TX0202DA	THYRISTOR	⚠
R801	DT122B8010	DIODE	

TRANSISTORS

Cct Ref	Parts Number	Description	
T801	50M3535A1	TRANS SMS	

TRANSFORMERS

Cct Ref	Parts Number	Description	
T401	50D10A2	TRANSFORMER	⚠

COILS

Cct Ref	Parts Number	Description	
L101	5CPZ100K02	PEAKING COIL	
L301	5CPZ109M04	COIL	⚠
L350	5CPZ109M04	COIL	⚠
L401	58H0000016	COIL	
L500	5CPZ120K02	COIL	
L501	5CPZ100K02	PEAKING COIL	
L502	5CPZ100K02	PEAKING COIL	
L510	5CPZ100K02	PEAKING COIL	
L511	5CPZ100K02	PEAKING COIL	
L512	5CPZ100K02	PEAKING COIL	
L600	5MC0000100	COIL	
L801	5MC0000100	COIL	
L802	58C9430599	COIL	⚠
L803	5MC0000100	COIL	

FILTERS

Cct Ref	Parts Number	Description	
LF801	5PLF24A1	LINE FILTER	
SF1	5PK9260M	SAW FILTER	
SF2	5PL9653M	SAW FILTER	
Z501	5PYXT5R5MB	FILTER	
Z502	5PTPS65MB	CERAMIC FILTER	
Z603	5PXF1B471M	FILTER	
Z605	5PXF1B471M	FILTER	
Z606	5PXF1B471M	FILTER	
Z630	5PXF1B471M	FILTER	

CRYSTALS

Cct Ref	Parts Number	Description
X502	5XE12R000E	CRYSTAL

RESISTORS

Cct Ref	Parts Number	Description				
R101	ERD25TJ473	CARBON	0.25W	5%	47K Ω	
R102	ERD25TJ472	CARBON	0.25W	5%	4K7 Ω	
R103	ERD25TJ123	CARBON	0.25W	5%	12K Ω	
R104	ERD25TJ104	CARBON	0.25W	5%	100K Ω	
R105	ERD25TJ392	CARBON	0.25W	5%	3K9 Ω	
R106	ERD25TJ101	CARBON	0.25W	5%	100 Ω	
R107	ERD25TJ101	CARBON	0.25W	5%	100 Ω	
R120	ERD25TJ101	CARBON	0.25W	5%	100 Ω	
R153	ERD25TJ222	CARBON	0.25W	5%	2K2 Ω	
R156	ERD25T163J	CARBON	2W	5%	16K Ω	
R157	ERD25TJ562	CARBON	0.25W	5%	5K6 Ω	
R159	ERD25TJ222	CARBON	0.25W	5%	2K2 Ω	
R160	ERD25TJ682	CARBON	0.25W	5%	6K8 Ω	
R161	ERD25TJ102	CARBON	0.25W	5%	1K Ω	
R162	ERD25TJ473	CARBON	0.25W	5%	47K Ω	
R163	ERD25TJ103	CARBON	0.25W	5%	10K Ω	
R164	ERD25TJ101	CARBON	0.25W	5%	100 Ω	
R170	ERD25TJ153	CARBON	0.25W	5%	15K Ω	
R302	ERD50T159J	CARBON	0.5W	5%	1R5 Ω	⚠
R310	ERD25TJ102	CARBON	0.25W	5%	1K Ω	
R311	ERD25TJ102	CARBON	0.25W	5%	1K Ω	
R340	ERD25TJ473	CARBON	0.25W	5%	47K Ω	
R341	ERDS1TJ152	CARBON	0.5W	5%	1K5 Ω	
R355	ERD25TJ272	CARBON	0.25W	5%	2K7 Ω	
R356	ERD25TJ562	CARBON	0.25W	5%	5K6 Ω	
R360	ERD25TJ564	CARBON	0.25W	5%	560K Ω	
R390	ERD25TJ159	CARBON	0,25W	5%	1R5 Ω	⚠
R401	ERD25TJ272	CARBON	0.25W	5%	2K7 Ω	
R404	ERD25TJ339	CARBON	0,25W	5%	3R3 Ω	⚠
R420	ERD25TJ223	CARBON	0.25W	5%	22K Ω	
R501	ERD25TJ101	CARBON	0.25W	5%	100 Ω	
R502	ERD25TJ101	CARBON	0.25W	5%	100 Ω	
R505	ERD25TJ101	CARBON	0.25W	5%	100 Ω	
R506	ERD25TJ332	CARBON	0.25W	5%	3K3 Ω	
R507	ERD25TJ101	CARBON	0.25W	5%	100 Ω	
R508	ERD25TJ332	CARBON	0.25W	5%	3K3 Ω	
R509	ERD25TJ681	CARBON	0.25W	5%	680 Ω	
R511	ERD25TJ333	CARBON	0.25W	5%	33K Ω	
R512	ERD25TJ101	CARBON	0.25W	5%	100 Ω	
R513	ERD25TJ101	CARBON	0.25W	5%	100 Ω	
R514	ERD25TJ101	CARBON	0.25W	5%	100 Ω	
R515	ERD25TJ153	CARBON	0.25W	5%	15K Ω	
R516	ERD25TJ393	CARBON	0.25W	5%	39K Ω	
R517	ERD25TJ102	CARBON	0.25W	5%	1K Ω	
R518	ERD25TJ273	CARBON	0.25W	5%	27K Ω	
R520	ERD25TJ183	CARBON	0.25W	5%	18K Ω	
R521	ERD25TJ391	CARBON	0.25W	5%	390 Ω	
R522	ERD25TJ221	CARBON	0.25W	5%	220 Ω	
R523	ERD25TJ331	CARBON	0.25W	5%	330 Ω	
R524	ERD25TJ561	CARBON	0.25W	5%	560 Ω	
R525	ERD25TJ104	CARBON	0.25W	5%	100K Ω	
R526	ERD25TJ479	CARBON	0,25W	5%	4R7 Ω	⚠
R527	ERD25TJ431	CARBON	0.25W	5%	430 Ω	
R528	ERD25TJ221	CARBON	0.25W	5%	220 Ω	
R530	ERD25TJ470	CARBON	0.25W	5%	47 Ω	
R531	ERD25TJ102	CARBON	0.25W	5%	1K Ω	
R533	ERD25TJ103	CARBON	0.25W	5%	10K Ω	
R534	ERD25TJ102	CARBON	0.25W	5%	1K Ω	
R535	ERD25TJ101	CARBON	0.25W	5%	100 Ω	
R537	ERD25TJ101	CARBON	0.25W	5%	100 Ω	
R538	ERD25TJ101	CARBON	0.25W	5%	100 Ω	
R539	ERD25TJ101	CARBON	0.25W	5%	100 Ω	
R555	ERD25TJ103	CARBON	0.25W	5%	10K Ω	
R556	ERD25TJ822	CARBON	0.25W	5%	8K2 Ω	
R567	ERD25TJ101	CARBON	0.25W	5%	100 Ω	
R570	ERD25TJ102	CARBON	0.25W	5%	1K Ω	
R571	ERD25TJ432	CARBON	0,25W	5%	4K3 Ω	
R572	ERD25TJ122	CARBON	0.25W	5%	1K2 Ω	
R573	ERD25TJ272	CARBON	0.25W	5%	2K7 Ω	
R575	ERD25TJ123	CARBON	0.25W	5%	12K Ω	
R580	ERD25TJ561	CARBON	0.25W	5%	560 Ω	
R585	ERD25TJ224J	CARBON	0,25W	5%	220K Ω	
R586	ERD25TJ221	CARBON	0.25W	5%	220 Ω	
R587	ERD25TJ101	CARBON	0.25W	5%	100 Ω	
R588	ERD25TJ101	CARBON	0.25W	5%	100 Ω	
R589	ERD25TJ101	CARBON	0.25W	5%	100 Ω	
R592	ERD25TJ103	CARBON	0.25W	5%	10K Ω	
R593	ERD25TJ103	CARBON	0.25W	5%	10K Ω	
R594	ERD25TJ103	CARBON	0.25W	5%	10K Ω	
R595	ERD25TJ473	CARBON	0.25W	5%	47K Ω	
R596	ERD25TJ302	CARBON	0,25W	5%	3K Ω	
R597	ERD25TJ153	CARBON	0.25W	5%	15K Ω	
R598	ERD25TJ153	CARBON	0.25W	5%	15K Ω	
R599	ERD25TJ221	CARBON	0.25W	5%	220 Ω	
R601	ERD25TJ432	CARBON	0,25W	5%	4K3 Ω	
R602	ERD25TJ332	CARBON	0.25W	5%	3K3 Ω	
R610	ERD25TJ332	CARBON	0.25W	5%	3K3 Ω	
R710	ERD25TJ431	CARBON	0.25W	5%	430 Ω	
R713	ERD25TJ201J	CARBON	0,25W	5%	200 Ω	
R720	ERD25TJ122	CARBON	0.25W	5%	1K2 Ω	
R721	ERD25TJ181J	CARBON	0,25W	5%	180 Ω	
R722	ERD25TJ221	CARBON	0.25W	5%	220 Ω	
R723	ERD25TJ331	CARBON	0.25W	5%	330 Ω	
R724	ERD25TJ471	CARBON	0.25W	5%	470 Ω	
R804	RF02Y338K	FUSIBLE	2W	10%	R33 Ω	⚠
R805	ERD50T100J	CARBON	0.5W	5%	10 Ω	⚠
R806	ERD25TJ472	CARBON	0.25W	5%	4K7 Ω	
R807	ERD50T272J	CARBON	0.5W	5%	2K7 Ω	
R810	ERD25TJ102	CARBON	0.25W	5%	1K Ω	
R811	RC-2Z565KP	CARBON	0.5W	10%	5.6M Ω	
R817	ERD25TJ473	CARBON	0.25W	5%	47K Ω	
R820	ERD25TJ102	CARBON	0.25W	5%	1K Ω	
R821	ERD25TJ102	CARBON	0.25W	5%	1K Ω	
R830	ERD25TJ332	CARBON	0.25W	5%	3K3 Ω	
R840	ERD25TJ220	CARBON	0.25W	5%	22 Ω	
R850	ERD50T479J	CARBON	0.5W	5%	4R7 Ω	⚠
R855	ERD25TJ185	CARBON	0,25W	5%	1.8M Ω	
R870	ERD25TJ222	CARBON	0.25W	5%	2K2 Ω	
R888	ERD25TJ103	CARBON	0.25W	5%	10K Ω	
R910	ERD25TJ101	CARBON	0.25W	5%	100 Ω	
R911	ERD25TJ101	CARBON	0.25W	5%	100 Ω	
R912	ERD25TJ101	CARBON	0.25W	5%	100 Ω	
R913	RC-2Z102K	RESISTOR	0.5W	10%	1K Ω	
R914	RC-2Z102K	RESISTOR	0.5W	10%	1K Ω	
R915	RC-2Z102K	RESISTOR	0.5W	10%	1K Ω	
R920	RF01Y188K	FUSIBLE	1W	10%	R18 Ω	⚠
R921	ERD25TJ102	CARBON	0.25W	5%	1K Ω	
R922	ERD25TJ102	CARBON	0.25W	5%	1K Ω	
R923	ERD25TJ102	CARBON	0.25W	5%	1K Ω	
RA01	ERD25TJ680	CARBON	0,25W	5%	68 Ω	⚠
RA02	ERD25TJ101	CARBON	0.25W	5%	100 Ω	
RA03	ERD25TJ101	CARBON	0.25W	5%	100 Ω	
RA04	ERD25TJ101	CARBON	0.25W	5%	100 Ω	
RA05	ERD25TJ334	CARBON	0.25W	5%	330K Ω	
RA06	ERD25TJ750	CARBON	0.25W	5%	75 Ω	
RA08	ERD25TJ750	CARBON	0.25W	5%	75 Ω	
RA09	ERD25TJ750	CARBON	0.25W	5%	75 Ω	
RA10	ERD25TJ101	CARBON	0.25W	5%	100 Ω	
RA11	ERD25TJ183	CARBON	0.25W	5%	18K Ω	
RA12	ERD25TJ183	CARBON	0.25W	5%	18K Ω	
RA16	ERD25TJ680	CARBON	0,25W	5%	68 Ω	⚠
RA19	ERD25TJ750	CARBON	0.25W	5%	75 Ω	
RA20	ERD25TJ473	CARBON	0.25W	5%	47K Ω	
RA30	ERD25TJ183	CARBON	0.25W	5%	18K Ω	
RA44	ERD25TJ104	CARBON	0.25W	5%	100K Ω	

CAPACITORS

Cct Ref	Parts Number	Description			
C101	ECEA1ES100	ELECT	25V	10pF	
C102	ECEA1ES470	ELECT	25V	47pF	
C103	ECCR1H102J	CERAMIC	50V	1nF	
C104	ECCR1H102J	CERAMIC	50V	1nF	
C106	ECEA1ES221	ELECT	25V	220pF	
C120	ECCR1H102J	CERAMIC	50V	1nF	
C121	ECEA1H100	ELECT	50V	10pF	
C150	ECCR1H103J	CERAMIC	50V	10nF	
C152	ECEA1H229	ELECT	50V	2.2µF	
C153	CBXF1H104Z	CERAMIC	50V	100nF	
C305	ECEA1ES221	ELECT	25V	220pF	
C313	CMXM2A104J	MYLAR	100V	100nF	
C320	CBXF1H104Z	CERAMIC	50V	100nF	
C350	ECCR1H473J	CERAMIC	50V	47nF	
C351	ECCR1H473J	CERAMIC	50V	47nF	
C390	CMXM2A473J	MYLAR	100V	47nF	
C401	ECEA1ES470	ELECT	25V	47pF	
C404	CMYH3C752J	MYLAR	1K6V	7.5nF	⚠
C408	CMYE2D474J	MYLAR	200V	470nF	
C412	ECEA2CS339	ELECT	160V	3.3µF	
C414	CMXM2A104J	MYLAR	100V	100nF	
C415	ECEA2CS100	ELECT	150V	10pF	
C417	CMXL2E104K	MYLAR	250V	100nF	
C418	ECCR1H102J	CERAMIC	50V	1nF	
C420	ECCR2H222J	CERAMIC	500V	2.2nF	⚠
C500	ECEA1H478	ELECT	50V	470µF	
C501	ECEA1ES100	ELECT	25V	10pF	
C504	CMXM2A332J	MYLAR	100V	3.3nF	
C509	ECEA1ES470	ELECT	25V	47pF	
C511	CMXM2A224J	MYLAR	100V	220nF	
C512	CMXM2A224J	MYLAR	100V	220nF	
C513	CBXF1H104Z	CERAMIC	50V	100nF	
C514	ECEA1ES101	ELECT	25V	100pF	
C515	CBZR1C222M	CERAMIC	16V	2200pF	
C516	CBZR1C472M	CERAMIC	16V	4700pF	
C517	ECEA1H109	ELECT	50V	1µF	
C518	CBZF1H104Z	CERAMIC	50V	100nF	
C519	ECEA1H229	ELECT	50V	2.2µF	
C520	ECCR1H102J	CERAMIC	50V	1nF	
C521	ECCR1H102J	CERAMIC	50V	1nF	
C523	ECCR1H103J	CERAMIC	50V	10nF	
C524	CMXM2A104J	MYLAR	100V	100nF	
C525	ECCR1H102J	CERAMIC	50V	1nF	
C526	CMXM2A104J	MYLAR	100V	100nF	
C527	CMXM2A473J	MYLAR	100V	47nF	
C528	ECEA1ES101	ELECT	25V	100pF	
C529	CBZF1H104Z	CERAMIC	50V	100nF	
C530	ECEA1CS101	ELECT	16V	100pF	
C531	ECCR1H473J	CERAMIC	50V	47nF	
C532	ECEA1ES100	ELECT	25V	10pF	
C533	ECCR1H102J	CERAMIC	50V	1nF	
C534	ECCR1H223J	CERAMIC	50V	22nF	
C535	ECCR1H223J	CERAMIC	50V	22nF	
C536	ECCR1H223J	CERAMIC	50V	22nF	
C537	CBXF1H104Z	CERAMIC	50V	100nF	
C555	ECEA1CS470	ELECT	16V	47µF	
C560	CBXF1H104Z	CERAMIC	50V	100nF	
C564	ECEA1ES101	ELECT	25V	100pF	
C565	CBXF1H104Z	CERAMIC	50V	100nF	
C570	ECCR1H472J	CERAMIC	50V	4.7nF	
C571	ECCR1H821J	CERAMIC	50V	820pF	
C577	ECCR1H561J	CERAMIC	50V	560pF	
C585	ECCR1H222J	CERAMIC	50V	2.2nF	
C587	ECCR1H101J	CERAMIC	50V	100pF	
C588	ECCR1H101J	CERAMIC	50V	100pF	
C589	ECCR1H101J	CERAMIC	50V	100pF	
C590	ECCR1H270J	CERAMIC	50V	27µF	
C591	ECCR1H270J	CERAMIC	50V	27µF	
C592	CBXF1H104Z	CERAMIC	50V	100nF	
C593	ECEA1ES101	ELECT	25V	100pF	
C599	ECEA1H229	ELECT	50V	2.2µF	
C600	ECEA1ES101	ELECT	25V	100pF	
C601	ECEA1H108	ELECT	50V	0.1µF	
C603	ECEA1CS471	ELECT	16V	470µF	
C650	ECEA1ES470	ELECT	25V	47pF	
C770	ECEA1CS101	ELECT	16V	100pF	
C771	CBZF1H104Z	CERAMIC	50V	100nF	
C803	ECCR3A472J	CERAMIC	1KV	4.7nF	⚠
C804	ECCR3A472J	CERAMIC	1KV	4.7nF	⚠
C805	CEYN2G101P	ELECT	400V	100µF	
C806	ECEA1H330	ELECT	50V	33pF	
C807	ECCR1H473J	CERAMIC	50V	47nF	
C808	ECEA1H479	ELECT	50V	4.7µF	
C809	ECCR1H102J	CERAMIC	50V	1nF	
C810	ECCR2H102J	CERAMIC	500V	1nF	⚠
C813	ECEA2CS101	ELECT	160V	100pF	
C814	ECEA2CS101	ELECT	160V	100pF	
C820	ECCR2H471J	CERAMIC	500V	470pF	⚠
C821	ECCR1H102J	CERAMIC	50V	1nF	
C823	ECEA1ES102	ELECT	25V	1nF	
C824	ECCR2H471J	CERAMIC	500V	470pF	⚠
C830	CBZF1H104Z	CERAMIC	50V	100nF	
C831	ECCR2H471J	CERAMIC	500V	470pF	⚠
C832	ECEA1ES102	ELECT	25V	1nF	
C835	ECEA1ES470	ELECT	25V	47pF	
C840	ECEA1CS332	ELECT	16V	3.3nF	
C841	ECEA1CS222	ELECT	16V	2.2nF	
C844	ECEA1ES101	ELECT	25V	100pF	
C850	ECCR1H821J	CERAMIC	50V	820pF	
C861	ECEA1ES102	ELECT	25V	1nF	
C863	ECEA1ES101	ELECT	25V	100pF	
C866	ECCR2H471J	CERAMIC	500V	470pF	⚠
C888	ECEA1CS470	ELECT	16V	47µF	
C910	ECCR1H561J	CERAMIC	50V	560pF	
C965	ECCR2H102J	CERAMIC	500V	1nF	⚠
C968	CMXL2E104K	MYLAR	250V	100nF	
CA01	ECCR1H101J	CERAMIC	50V	100pF	
CA02	ECCR1H101J	CERAMIC	50V	100pF	
CA03	ECCR1H101J	CERAMIC	50V	100pF	
CA04	ECCR1H229J	ELECT	50V	2.2µF	
CA05	ECCR1H102J	CERAMIC	50V	1nF	
DA04	CBZR1C222M	CERAMIC	16V	2200pF	

SWITCHES

Cct Ref	Parts Number	Description
SW700	5S50101090	SWITCH
SW701	5S50101090	SWITCH
SW702	5S50101090	SWITCH
SW703	5S50101090	SWITCH
SW704	5S50101090	SWITCH
SW801	5S40101146	SWITCH

DIFFERENCES FOR MODEL TC--14B4RP

EXPLODED VIEW

7	4852151400	BACK COVER	⚠

Cct Ref	Parts Number	Description	
8	UR51EC946-1	BATTER COVER (REMOTE)	
10	4852071721	CABINET	⚠
11	485E-14B4RP	E P.C.B.	⚠
12	485ML-14B4RP	MODEL LABEL	⚠
13	4855623201	PANASONIC BADGE	
14	4854943503	POWER BUTTON	
15	EUR511380	REMOTE CONTROL	⚠
16	UV1316/A	TUNER	

MISCELLANEOUS COMPONENTS

.	4851934302	CONTROL BUTTONS	
.	4857538301	AV COVER	
.	UM-3DJ-2P	BATTERY PACK	

INSTRUCTION BOOKS

	TQB8E3766M	BULGARIAN	⚠
	TQB8E3766N	ROMANIAN	⚠
	TQB8E3766P	POLISH	⚠
	TQB8E3766Q	HUNGARIAN	⚠
	TQB8E3766R	CZECH	⚠
	TQB8E3766U	ENGLISH	⚠

I.C.s

I501	1MS3813DD1	DECODER/VIDEO PROCESSO	
I702	X24C-14B4RP	EAROM*	
I703	KRT30	I.R. RECEIVER	

FUSES

G900	4SG0D00103	FUSE	⚠

DIODES

D313	DBYW36	DIODE
D405	DBYW36	DIODE
D450	DBYW36	DIODE
D591	DTZX2V4A	DIODE
D707	DSML1216W	LED
D805	DBYW36	DIODE
D806	DBYW36	DIODE
D808	DBYW36	DIODE
D809	DBYW36	DIODE
D810	DBYW36	DIODE
D830	DBYW36	DIODE
D831	DBYW36	DIODE
D860	DBYW36	DIODE

TRANSISTORS

Q101	2SC5343Y	TRANSISTR
Q152	2SC5343Y	TRANSISTR
Q154	2SC5343Y	TRANSISTR
Q155	2SC5343Y	TRANSISTR
Q401	2SD2499	TRANSISTOR
Q402	2SD1207	TRANSISTR
Q501	2SA1980Y	TRANSISTR
Q502	2SC5343Y	TRANSISTR
Q503	2SC5343Y	TRANSISTR
Q510	2SA1980Y	TRANSISTR
Q511	2SA1980Y	TRANSISTR
Q520	2SC5343Y	TRANSISTR
Q807	2SC5343Y	TRANSISTR
Q808	2SC5343Y	TRANSISTR
Q809	2SC5343Y	TRANSISTR
Q810	2SC5343Y	TRANSISTR
Q811	2SC5343Y	TRANSISTR

RESISTORS

Cct Ref	Parts Number	Description				
R305	RS02Y331JS	METAL	2W	5%	330 Ω	
R350	RN-4Z1501F	METAL	0.25W	1%	1.5K Ω	⚠
R351	RN-4Z1501F	METAL	0.25W	1%	1.5K Ω	⚠
R415	RS02Y102JS	METAL	2W	5%	1K Ω	
R450	RS02Y103JS	METAL	2W	5%	10K Ω	
R591	ERD25TJ221	CARBON	0.25W	5%	220 Ω	
R802	RS02Y753JS	METAL	2W	5%	75K Ω	
R803	RS02Y473JS	METAL	2W	5%	47K Ω	
R808	RS02Y821JS	METAL	2W	5%	820 Ω	
R819	RX07C339JF	RESISTOR	7W	5%	3R3 Ω	⚠
R829	ERD25TJ153	CARBON	0.25W	5%	15K Ω	

CAPACITORS

C154	ECEA1ES479	ELECT	25V	4.7μF	
C155	ECEA1ES479	ELECT	25V	4.7μF	
C156	ECEA1ES479	ELECT	25V	4.7μF	
C315	ECEA2CS470	ELECT	160V	47pF	
C502	ECEA1ES100	ELECT	25V	10pF	
C522	ECEA1ES479	ELECT	25V	4.7μF	
C602	ECCR1H103J	CERAMIC	50V	10nF	
C801	CL1JB3474K	FILM	250V	470nF	
C812	CH1AFE472M	CERAMIC	4kV	4700pF	⚠

DIFFERENCES FOR MODEL TC--14B4RPB

EXPLODED VIEW

7	4852151400	BACK COVER	⚠
8	UR51EC946-1	BATTER COVER (REMOTE)	
10	4852071721	CABINET	⚠
11	485E-14B4RPB	E P.C.B.	⚠
12	485ML-14B4RP	MODEL LABEL	⚠
13	4855623201	PANASONIC BADGE	
14	4854943503	POWER BUTTON	
15	EUR511380	REMOTE CONTROL	⚠
16	UV1316/A	TUNER	

MISCELLANEOUS COMPONENTS

.	4851934302	CONTROL BUTTONS
.	4857538301	AV COVER
.	UM-3DJ-2P	BATTERY PACK

INSTRUCTION BOOKS

	TQB8E3766M	BULGARIAN	⚠
	TQB8E3766N	ROMANIAN	⚠
	TQB8E3766P	POLISH	⚠
	TQB8E3766Q	HUNGARIAN	⚠
	TQB8E3766R	CZECH	⚠
	TQB8E3766U	ENGLISH	⚠

I.C.s

I501	1MS3813DD1	DECODER/VIDEO PROCESSO
I702	X24C-14B4RPB	EAROM*
I703	KRT30	I.R. RECEIVER

FUSES

G900	4SG0D00103	FUSE	⚠

DIODES

D313	DBYW36	DIODE
D405	DBYW36	DIODE
D450	DBYW36	DIODE
D591	DTZX2V4A	DIODE
D707	DSML1216W	LED
D805	DBYW36	DIODE
D806	DBYW36	DIODE
D808	DBYW36	DIODE
D809	DBYW36	DIODE
D810	DBYW36	DIODE
D830	DBYW36	DIODE
D831	DBYW36	DIODE
D860	DBYW36	DIODE

TRANSISTORS

Cct Ref	Parts Number	Description
Q101	2SC5343Y	TRANSISTR
Q152	2SC5343Y	TRANSISTR
Q154	2SC5343Y	TRANSISTR
Q155	2SC5343Y	TRANSISTR
Q401	2SD2499	TRANSISTOR
Q402	2SD1207	TRANSISTR
Q501	2SA1980Y	TRANSISTR
Q502	2SC5343Y	TRANSISTR
Q503	2SC5343Y	TRANSISTR
Q510	2SA1980Y	TRANSISTR
Q511	2SA1980Y	TRANSISTR
Q520	2SC5343Y	TRANSISTR
Q807	2SC5343Y	TRANSISTR
Q808	2SC5343Y	TRANSISTR
Q809	2SC5343Y	TRANSISTR
Q810	2SC5343Y	TRANSISTR
Q811	2SC5343Y	TRANSISTR

RESISTORS

R305	RS02Y331JS	METAL	2W	5%	330 Ω	
R350	RN-4Z1501F	METAL	0.25W	1%	1.5K Ω	⚠
R351	RN-4Z1501F	METAL	0.25W	1%	1.5K Ω	⚠
R415	RS02Y102JS	METAL	2W	5%	1K Ω	
R450	RS02Y103JS	METAL	2W	5%	10K Ω	
R591	ERD25TJ221	CARBON	0.25W	5%	220 Ω	
R802	RS02Y753JS	METAL	2W	5%	75K Ω	
R803	RS02Y473JS	METAL	2W	5%	47K Ω	
R808	RS02Y821JS	METAL	2W	5%	820 Ω	
R819	RX07C339JF	RESISTOR	7W	5%	3R3 Ω	⚠
R829	ERD25TJ153	CARBON	0.25W	5%	15K Ω	

CAPACITORS

C154	ECEA1ES479	ELECT	25V	4.7μF	
C155	ECEA1ES479	ELECT	25V	4.7μF	
C156	ECEA1ES479	ELECT	25V	4.7μF	
C315	ECEA2CS470	ELECT	160V	47pF	
C502	ECEA1ES100	ELECT	25V	10pF	
C522	ECEA1ES479	ELECT	25V	4.7μF	
C602	ECCR1H103J	CERAMIC	50V	10nF	
C801	CL1JB3474K	FILM	250V	470nF	
C812	CH1AFE472M	CERAMIC	4kV	4700pF	⚠

DIFFERENCES FOR MODEL TX--14B4TP

EXPLODED VIEW

7	4852151402	BACK COVER	⚠
9	UR51EC904A	BATTERY COVER (REMOTE)	
10	4852071723	CABINET	⚠
11	485E-14B4TP	E P.C.B.	⚠
12	485ML-14B4TP	MODEL LABEL	⚠
13	48556232SS01	PANASONIC BADGE	
14	4854943506	POWER BUTTON	⚠
15	EUR511300	REMOTE CONTROL	

MISCELLANEOUS COMPONENTS

.	4851934304	CONTROL BUTTON	
.	4857538302	AV COVER	⚠

INSTRUCTION BOOKS

	TQB8E3765M	BULGARIAN	⚠
	TQB8E3765N	ROMANIAN	⚠
	TQB8E3765P	POLISH	⚠
	TQB8E3765Q	HUNGARIAN	⚠
	TQB8E3765R	CZECH	⚠
	TQB8E3765U	ENGLISH	⚠

I.C.s

I501	1MS3614DD1	DECODER/VIDEO PROCESSO
I702	X24C-14B4TP	EAROM*

DIODES

D313	1N4937G	DIODE

Cct Ref	Parts Number	Description
D405	1N4937G	DIODE
D450	1N4937G	DIODE
D591	DUZ2R4B	ZENER DIODE
D805	1N4937G	DIODE
D806	1N4937G	DIODE
D808	1N4937G	DIODE
D809	1N4937G	DIODE
D810	1N4937G	DIODE
D830	1N4937G	DIODE
D831	1N4937G	DIODE
D860	1N4937G	DIODE

TRANSISTORS

Q401	2SD2578	TRANSISTOR
Q402	KTC3209Y	TRANSISTOR

RESISTORS

R591	ERD25TJ101	CARBON	0.25W	5%	100 Ω
R823	ERD25TJ102	CARBON	0.25W	5%	1K Ω
R829	ERD25TJ103	CARBON	0.25W	5%	10K Ω
RA99	ERD25TJ331	CARBON	0.25W	5%	330 Ω

CAPACITORS

C154	ECEA1H479	ELECT	50V	4.7μF	
C155	ECEA1H479	ELECT	50V	4.7μF	
C156	ECEA1H479	ELECT	50V	4.7μF	
C315	ECEA2A470	ELECT	100V	47pF	
C502	ECEA1H220	ELECT	50V	22pF	
C522	ECEA1H479	ELECT	50V	4.7μF	
C602	ECCR1H223J	CERAMIC	50V	22nF	
C801	CL1UC3474M	FILM	250V	470nF	
C812	CH1BFE472M	CAPACITO	4kV	4.7nF	⚠

DIFFERENCES FOR MODEL TX--14B4TPB

EXPLODED VIEW

7	4852151402	BACK COVER	⚠
9	UR51EC904A	BATTERY COVER (REMOTE)	
10	4852071723	CABINET	⚠
11	485E-14B4TPB	E P.C.B.	⚠
12	485ML-14B4TP	MODEL LABEL	⚠
13	48556232SS01	PANASONIC BADGE	
14	4854943506	POWER BUTTON	⚠
15	EUR511300	REMOTE CONTROL	

MISCELLANEOUS COMPONENTS

.	4851934304	CONTROL BUTTON	
.	4857538302	AV COVER	⚠

INSTRUCTION BOOKS

	TQB8E3765M	BULGARIAN	⚠
	TQB8E3765N	ROMANIAN	⚠
	TQB8E3765P	POLISH	⚠
	TQB8E3765Q	HUNGARIAN	⚠
	TQB8E3765R	CZECH	⚠
	TQB8E3765U	ENGLISH	⚠

I.C.s

I501	1MS3614DD1	DECODER/VIDEO PROCESSO
I702	X24C-14B4TPB	EAROM*

DIODES

D313	1N4937G	DIODE
D405	1N4937G	DIODE
D450	1N4937G	DIODE
D591	DUZ2R4B	ZENER DIODE
D805	1N4937G	DIODE
D806	1N4937G	DIODE
D808	1N4937G	DIODE
D809	1N4937G	DIODE

Cct Ref	Parts Number	Description				
D810	*1N4937G*	*DIODE*				
D830	1N4937G	DIODE				
D831	1N4937G	DIODE				
D860	1N4937G	DIODE				
TRANSISTORS						
Q401	2SD2578	TRANSISTOR				
Q402	KTC3209Y	TRANSISTOR				
RESISTORS						
R591	ERD25TJ101	CARBON	0.25W	5%	100 Ω	
R823	ERD25TJ102	CARBON	0.25W	5%	1K Ω	
R829	ERD25TJ103	CARBON	0.25W	5%	10K Ω	
RA99	ERD25TJ331	CARBON	0.25W	5%	330 Ω	
CAPACITORS						
C154	ECEA1H479	ELECT	50V		4.7µF	
C155	ECEA1H479	ELECT	50V		4.7µF	
C156	ECEA1H479	ELECT	50V		4.7µF	
C315	ECEA2A470	ELECT	100V		47pF	
C502	ECEA1H220	ELECT	50V		22pF	
C522	ECEA1H479	ELECT	50V		4.7µF	
C602	ECCR1H223J	CERAMIC	50V		22nF	
C801	CL1UC3474M	FILM	250V		470nF	
C812	CH1BFE472M	CAPACITO	4kV		4.7nF	⚠

Cct Ref	Parts Number	Description

SCHEMATIC DIAGRAMS FOR MODELS

TX-14B4TP
TX-14B4TP/B
TC-14B4RP
TC-14B4RP/B

(Z-185 CHASSIS)

IMPORTANT SAFETY NOTICE

Components identified by ⚠ mark have special characteristics important for safety. When replacing any of these components, use only manufacturer's specified parts.

NOTE

1. RESISTOR
   All resistors are carbon ¼W resistor, unless marked otherwise.
   Unit of resistance is OHM (Ω) (k=1,000, M=1,000,000)
2. CAPACITORS
   All capacitors are ceramic 50V unless marked otherwise.
   Unit of capacitance is µF unless otherwise stated.
3. COIL
   Unit of inductance is µH, unless otherwise stated.
4. TEST POINT
   ⫯ Test Point Position
5. EARTH SYMBOL
   ⏚ Chassis Earth (Cold)
   ⏊ Line Earth (Hot)
6. VOLTAGE MEASUREMENT
   Voltage is measured by a d.c. voltmeter.
   Measurement conditions are as follows:

Power source	a.c. 220V-240V, 50Hz
Receiving Signal	Colour Bar signal (RF)
All customer controls	Maximum position

7.
   ➡ Indicates the Video signal path
   ⇨ Indicates the Audio signal path

These schematic diagrams are the latest at time of printing and are subject to change without notice.

REMARKS

a. Do not touch the hot part, or the hot and cold parts at the same time, as you are liable to a shock hazard.
b. Do not short circuit the hot and cold circuits as electrical components may be damaged.
c. Do not connect an instrument, such as an oscilloscope, to the hot and cold circuits simultaneously as this may cause fuse failure. Connect the earth of the instruments to the earth connection of the circuit being measured.
d. Make sure to disconnect the power plug before removing the chassis.

NOTE

1. The Power Supply Circuit contains a circuit area, which uses a separate power supply to isolate the earth connection. The circuit is defined by HOT and COLD indications in the schematic diagram. All circuits, except the Power Circuit, are COLD.

NOTE:

1. RESISTANCE IS SHOWN IN OHM. K=1000, M=1000000
2. UNLESS OTHERWISE NOTED IN SCHEMATIC ALL CAPACITOR VALUES ARE EXPRESSED IN uF
3. VOLTAGES READ WITH "VTVM" FROM POINT INDICATED TO CHASSIS GROUND USING A COLOR BAR SIGNAL WITH ALL CONTROLS AT NORMAL LINE 230V AC VOLTAGE READINGS SHOWN ARE NORMAL VALUES AND MAY VARY +20% EXCEPT H.V
4. THIS CIRCUIT DIAGRAM IS A STANDARD ONE CIRCUIT PRINTED MAY BE SUBJECT TO CHANGE FOR PRODUCT IMPROVEMENT WITHOUT PRIOR NOTICE

WARNING:

BEFORE SERVICING THE CHASSIS, READ "X-RAY RADIATION", "SAFETY PRECAUTION", AND "PRODUCT SAFETY NOTICE" IN SERVICE MANUAL

CAUTION TO SERVICE TECHNICIANS:

BEFORE RETURNING THE RECEIVER TO CUSTOMER, LEAKAGE CURRENT OR RESISTANCE MEASUREMENTS SHOULD BE PERFORMED TO DETERMINE THAT EXPOSED PARTS ARE PROPERLY INSULATED FROM THE SUPPLY CIRCUIT.

THE DIFFERENT PARTS FOR CRT

LOC.	14" PHILIPS
V901	A34EAC01X06
SCT1	PCS833A
C404	1.6KV 7500pF
C408	200V 0.47 (M)
L401	L102
R350	1.5K (1%)
R351	1.5K (1%)
R556	1/6W 8.2K
R823	JUMPER
R920	1W 0.18 (JA)

THE DIFFERENT PARTS FOR SYSTEM

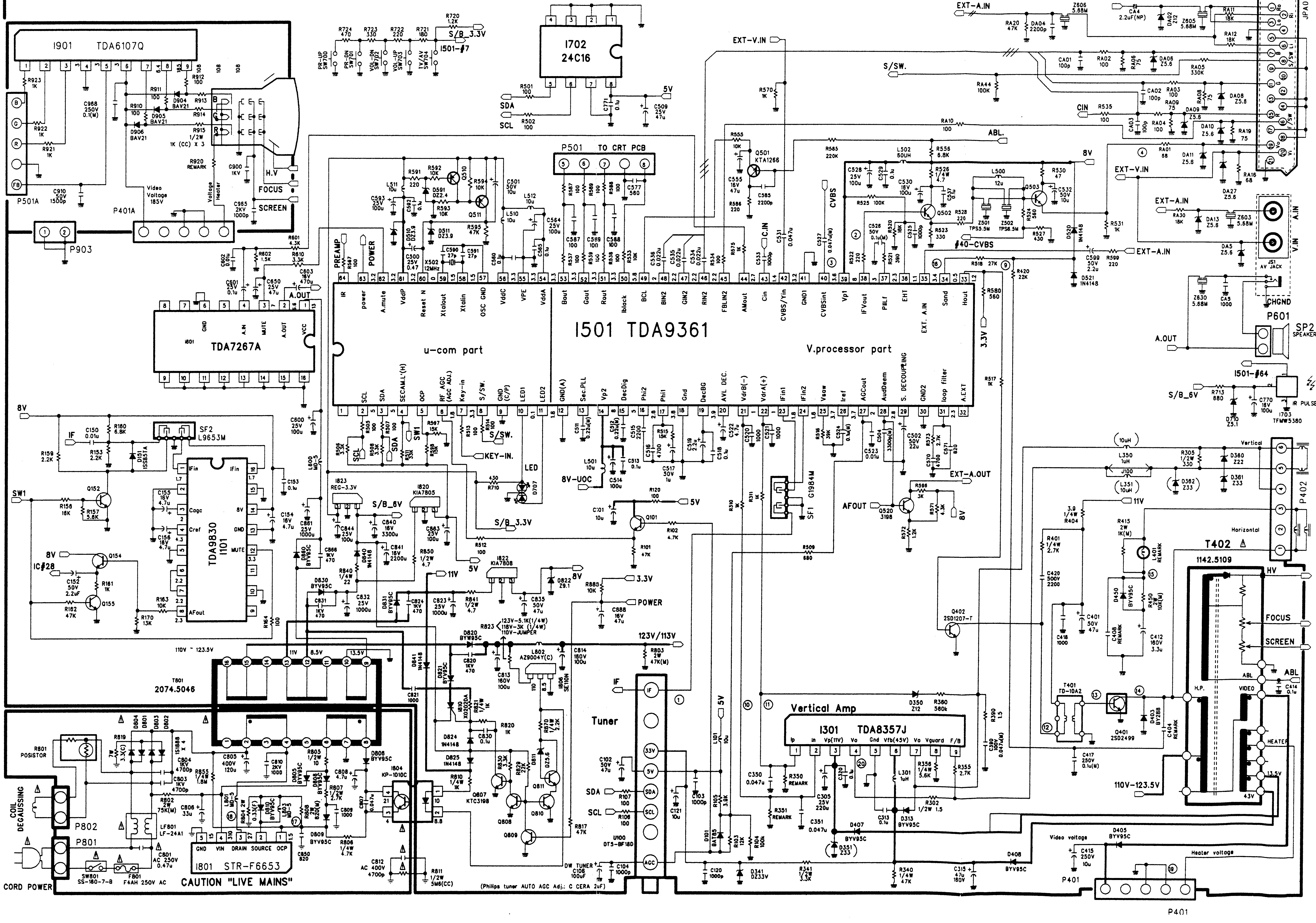
LOC.	NAME	TA	TF	TU
SF01	SAW FILTER	G1984M	G1984M	J1981M
SF02	SAW FILTER	L9653M	X	X
PWC1	POWER CORD AS	CW4232	CW4232	CW3222
Z501	CERA.FILTER	TPS5.5MB	TPS5.5MB	TPS6.0MB
Z502	CERA.FILTER	X	X	X
C801	C LINE ACROSS	AC 250V 0.47u	AC 250V 0.47u	AC 250V 0.47u
I101	IC S.IF	TDA9830	X	X
R153	R.C-FILM	2.2K	X	X
R156	R.C-FILM	16K	X	X
R157	R.C-FILM	5.6K	X	X
R159	R.C-FILM	2.2K	X	X
R160	R.C-FILM	6.8K	X	X
R161	R.C-FILM	1K	X	X
R162	R.C-FILM	47K	X	X
R163	R.C-FILM	10K	X	X
R164	R.C-FILM	100	X	X
Q152	TR	KTC3198	X	X
Q154	TR	KTC3198	X	X
Q155	TR	KTC3198	X	X
D151	DIODE	1SS85TA	X	X
C150	C. CERA	0.01u	X	X
C152	C. ELECTRO	50V 2.2uF	X	X
C153	C. CERA	0.1u	X	X
C154	C. ELECTRO	16V 4.7u	X	X
C155	C. ELECTRO	16V 4.7u	X	X
C156	C. ELECTRO	16V 4.7u	X	X
C502	C. ELECTRO	50V 22uF	50V 22uF	50V 4.7uF
C590	C. CERA	27pF	27pF	30pF (2%)
C591	C. CERA	27pF	27pF	30pF (2%)
C602	C. CERA	0.01uF	0.01uF	0.022uF

PRODUCT SAFETY NOTE :

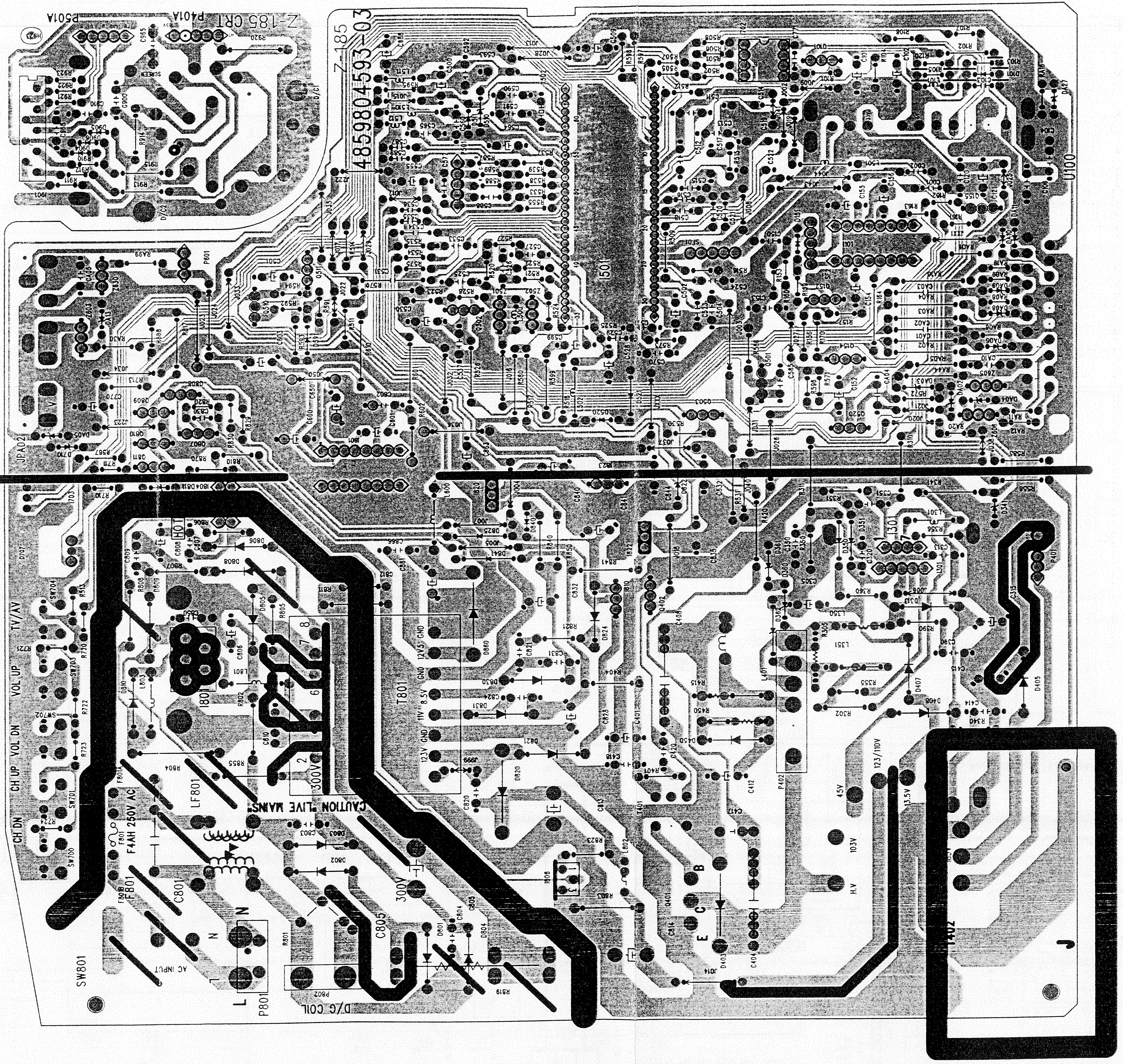
THE COMPONENTS MARKED WITH ⚠ ARE IMPORTANT FOR MAINTAINING THE SAFETY OF THE SET AND SHOULD BE REPLACED ONLY WITH TYPES IDENTICAL TO THOSE IN THE ORIGINAL OR SPECIFIED ONE IN THE PART LIST. DON'T DEGRADE THE SAFETY OF THE SET THROUGH IMPROPER SERVICING.

PANASONIC

Z-185 SCHMETIC DIAGRAM

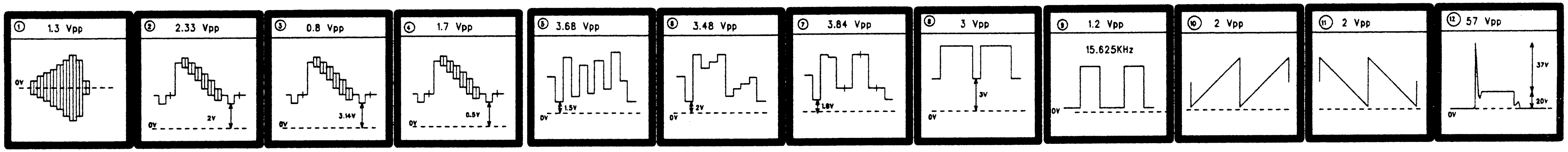

I901 TDA6107Q
P501A
P401A
P903
Video Voltage 185V
Voltage Heater
H.V
FOCUS
SCREEN
I702 24C16
SDA
SCL
5V
R720 1.2K
S/B_3.3V
I501-#7
PR-UP SW700
PR-DN SW701
VOL-DN SW702
VOL-UP SW703
TV/AV SW704
P501 TO CRT PCB
EXT-A.IN
EXT-A.OUT
EXT-V.IN
S/SW.
CIN
ABL.
8V
JPA01
Q501 KTA1266
Q502
Q503
#40-CVBS
CVBS
C.IN
I501 TDA9361
u-com part
V.processor part
3.3V
I601 TDA7267A
A.OUT
PREAMP
POWER
IR
power
A.mute
VddP
Reset N
Xtalout
Xtalin
OSC GND
VddC
VPE
VddA
Bout
Gout
Rout
Iblack
BCL
BIN2
GIN2
RIN2
FBLIN2
AMout
Cin
CVBS/Yin
GND1
CVBSint
Vp1
IFVout
PLLf
EHT
EXT. A.IN
Sand
Hout
SCL
SDA
SECAM/L'(H)
OCP
RF AGC (AGC ADJ.)
Key-in
S/SW.
GND (C/P)
LED1
LED2
GND(A)
Sec.PLL
Vp2
DecDig
Phi2
Phi1
Gnd
DecBG
AVL DEC.
VdrB(-)
VdrA(+)
IFin1
IFin2
Vsaw
Iref
AGCout
AudDeem
S. DECOUPLING
GND2
loop filter
A.EXT
KEY-IN.
LED
D707
8V-UOC
Q101
SF1 G1984M
AFOUT
Q520 3198
EXT-A.OUT
11V
CHGND
AV JACK
A.IN
V.IN
P601
SP2 SPEAKER
I501-#64
S/B_6V
I703 TFMW5380
IR PULSE
Vertical
Horizontal
P402
T402
1142.5109
HV
FOCUS
SCREEN
ABL
VIDEO
HEATER
H.P.
13.5V
43V
110V-123.5V
Q401 2SD2499
T401 TD-10A2
Q402 2SD1207-T
I101 TDA9830
SF2 L9653M
IF
SW1
Q152
Q154
Q155
IC#28
IFin
Cagc
Cref
AFout
MUTE
I823 REG-3.3V
I820 KIA7805
I822 KIA7808
S/B_6V
S/B_3.3V
5V
11V
3.3V
POWER
123V/113V
123V-5.1K(1/4W)
118V-3K (1/4W)
110V-JUMPER
L802 AZ9004Y(C)
110V ~ 123.5V
T801 2074.5046
11V
8.5V
13.5V
I804 KP-1010C
Q807 KTC3198
Q808
Q809
Q810
Q811
Tuner
U100 DT5-BF18D
IF
33V
5V
SDA
SCL
AGC
DW TUNER C108 100uF
(Philips tuner AUTO AGC Adj.: C CERA 2uF)
Vertical Amp
I301 TDA8357J
Ip
In
Vp(11V)
Vo
Gnd
Vfb(45V)
Vo
Vguard
F/B
Video voltage
Heater voltage
P401
COIL DEGAUSSING
P802
P801
CORD POWER
R801 POSISTOR
SW801 SS-180-7-B
FB01 F4AH 250V AC
LF801 LF-24A1
I801 STR-F6653
GND VIN DRAIN SOURCE OCP
CAUTION "LIVE MAINS"

PRINTED CIRCUIT BOARD

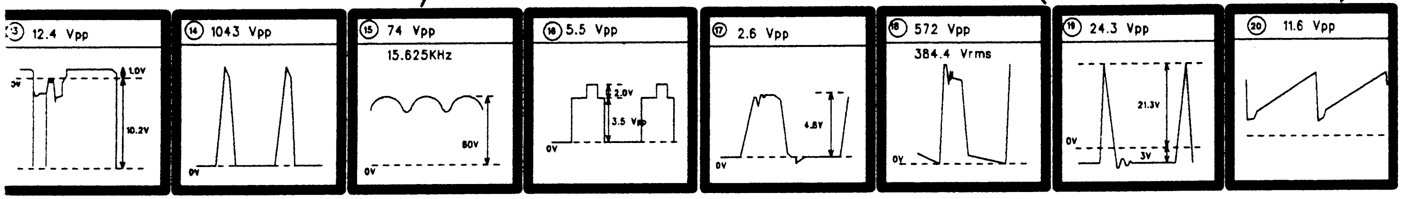

Z-185 CRT
P501A
P401A
Z-185
4859804593 03
U100
I501
T801
LF801
F4AH 250V AC
CAUTION LIVE MAINS
HOT
300V
C801
C805
F801
SW801
AC INPUT
P801
L
N
D/G COIL
P802
TV/AV
VOL UP
VOL DN
CH UP
CH DN
JPA02
I402
H.V
103V
45V
123/110V
13.5V
B
C
E
J

* WAVEFORMS

TEST CONDITIONS : PAL-B/G COLOR BAR (NOR.1)


① 1.3 Vpp
0V
② 2.33 Vpp
0V
2V
③ 0.8 Vpp
0V
3.14V
④ 1.7 Vpp
0V
0.5V
⑤ 3.68 Vpp
0V
1.5V
⑥ 3.48 Vpp
0V
2V
⑦ 3.84 Vpp
1.8V
⑧ 3 Vpp
0V
3V
⑨ 1.2 Vpp
15.625KHz
0V
⑩ 2 Vpp
⑪ 2 Vpp
⑫ 57 Vpp
0V
37V
20V

S/N: 4858904593-00 (MAY. 2001)


3) 12.4 Vpp
0V
1.0V
10.2V
⑭ 1043 Vpp
0V
⑮ 74 Vpp
15.625KHz
0V
80V
⑯ 5.5 Vpp
0V
2.0V
3.5 Vpp
⑰ 2.6 Vpp
0V
4.8V
⑱ 572 Vpp
384.4 Vrms
0V
⑲ 24.3 Vpp
0V
21.3V
3V
⑳ 11.6 Vpp